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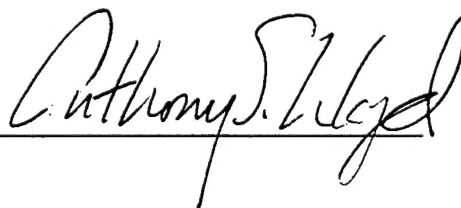
Military Environmental Response Operation (MERO) support to the CINC's

By

Anthony S. Lloyd
Lcdr, USCG

A paper submitted to the Faculty of the Naval War College in partial satisfaction of the requirements of the Department of Joint Military Operations.

The contents of this paper reflect my own personal views and are not necessarily endorsed by the Naval War College or the Department of the Navy.

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Abstract

Clausewitz's dictum that war is "not merely an act of policy but a true political instrument, a continuation of political intercourse, carried on with other means" was intended to show the supremacy of policy, and that war is a means to an end. Environmental damage and terror is an asymmetric means to achieve policy goals but rogue states and non state actors have shown, and will continue to show, an inclination to use environmental threats to inhibit action against them. Responding to environmental threats requires special expertise and support. The U.S. Coast Guard has such special expertise mastered from daily domestic operations in this core mission area. This CG environmental expertise is available to the regional CINCs. The 1995 DOD - DOT Memorandum of Understanding is one way that CINCs can request CG expertise and equipment for war or operations other than war if environmental threats appear.

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Introduction

“... protection of the environment is emerging as a fundamental legal norm in the international system.”¹

The emergence of environmental considerations within the context of the National Security Strategy (NSS) is characteristic of the post cold war security environment. The discussion of environmental issues as NSS concerns occurred prior to the fall of the Berlin wall. But the disappearance of the Soviet Union allowed environmental threats and challenges to be seen in a different light. Saddam Hussein's use of “environmental warfare” during the Gulf war did not affect coalition military operations but the event was significant enough to focus attention on “environmental threats.”

Many experts question the wisdom of linking environmental issues with our national security strategy – noting the vagueness of the linkage and potential negative impacts on military readiness. Some scholars see this as a significant departure from the traditional focus on “interstate violence” while others disagree, claiming environmental concerns are “the national security issue of the 21st century.”² Research indicates President Bush's decision to include environmental concerns in the 1991 NSS recognized the importance of emerging environmental issues.³

The National Military Strategy (NMS) specifically states “environmental strains” cause instability and lists “threats to the environment” a potential transnational risk to US interests abroad.⁴ Whether “environmental security” and issues surrounding “environmental diplomacy,” rightfully belong in the realm of national security strategy is beyond the scope of this paper. This study assumes current strategic concerns articulated in the 1999 NSS, including environmental security, is the legitimate framework for NSS goals. Within this

context the regional combatant Commanders (CINC's) are continuously challenged to address a wide variety of "environmental concerns" during military ops other than war (MOOTW) and war.

Increasingly the CINC's are faced with finding the appropriate skills to address tough environmental issues. Host nation (HN) concerns, international and US laws are often at the root of environmental issues. For example, many issues arose in Haiti regarding potable water, disposal of waste, and dump and munitions storage.⁵ In Haiti and throughout the 1990's CINC's have utilized the Army Corp of Engineers, contractors, and combat units to address environmental issues. But if a CINC utilizes non-DOD options, such as contractors for spill response, they still need managerial and technical expertise to accomplish the mission. The CINC's voiced concerns related to this during a Center for Naval Analysis study, which recently asked them to identify growth trends, within their respective regions, for issues to which the CG could act as the force provider. Not surprisingly, of the list of CG related topics, the upward trend of "environmental issues" was the only one identified as a "long-term growth" concern for the CINC's.⁶ Environmental issues are often tough to resolve requiring specialized equipment and expertise to ensure a cohesive response.⁷

This paper begins with a brief discussion of potential asymmetries and threats. Next, CG domestic environmental responsibilities for oil spill and hazardous chemical pollution prevention and response are discussed to show the source of CG expertise and equipment. Third, a discussion of the Iraqi oil spill and other cases exemplify the application of CG capabilities and expertise. Finally, the discussion identifies policy and joint doctrine that supports increased coordination, planning, and exercising between the CG and the CINC's to

prepare for Military Environmental Response Operations (MERO). Opportunities to improve joint doctrine on environmental issues are recommended in closing.

Thesis

The likelihood of the Coast Guard providing military environmental response operations (MERO) support to theater CINC's is increasing, there are improvements within reach that will help increase the probability of mission success.

Potential Asymmetries and Threats

The CINC's have stated that this issue is a growing concern. The Gulf War presents an example of how environmental threats potentially impact mission accomplishment for US objectives during a major theater war. Not limited to major theaters of war, environmental threats are a concern during MOOTW as well. Traditional discussions about protecting lines of communications or opening seaports of debarkation may require MERO planning. For example, a 1996 Center for Naval Analyses study pointed out that fifty one percent of the world's shipping tonnage transits the straits of Malacca, Sunday, Lombok, or past the Spratly islands in the South China Sea each year.⁸ A hypothetical closure of the straits of Malacca and the Port of Singapore would require rerouting maritime commerce through other key choke points. The study found that bypassing the Malacca straits and using the Lombok and Makassar straits was a reasonable alternative, not significantly affecting world-shipping prices. However, Indonesia and Malaysia have sensitive coastlines and fisheries zones requiring protection if super tanker traffic was rerouted through the Lombok and Makassar straits.

Naval activity to support merchant shipping would require some level of spill response planning even though significant caches of oil spill response resources exist in the Southeast Asian region. MERO capabilities are also applicable for accidents, natural

disaster, terrorism, and intentional damage, all of which can undermine the principles of war and MOOTW. The following graphic generically illustrates how environmental threats could affect both the principles of war and of MOOTW. A discussion of CG capabilities and expertise that can counter and mitigate negative effects follows the graphic.

Environmental effects on the Principles of war/MOOTW		
Negative effects of environmental events* on the Principles of War/MOOTW		
MOOTW	Principles Of	War
	Environmental threats and events are complex and difficult to prosecute and can prevent the achievement of mil objectives.	
	Environmental threats or events are almost always Interagency activities which degrades unity of effort.	
	Environmental threats/incidents are hard to secure because they can cover wide areas and cross multiple jurisdictions	
	Environmental Incidents are complex in nature which goes against simplicity. Also, Governments that do not effectively deal with environmental incidents risk losing additional legitimacy by appearing ineffective.	
	Additional counters to these principles can occur due environmental threats, incidents, and effects.	

The Coast Guard's Environmental Expertise

Environmental protection is one of the CG's five core missions. It includes protecting living and non-living marine resources – fisheries and endangered marine species, and offshore mineral resources – and the control, response, and remediation of pollution incidents. Former CG Captain and Chief of the Marine Environmental Protection Division in CG Headquarters during the Gulf War, William Holt, summarized briefly in 1991 a sentiment that is still true today. "It is through the CG's commitment to marine environmental protection that we have achieved a leadership role in the world community and have become a focal point for technical expertise and operational assistance."⁹

Domestically, the National Oil and Hazardous Substances Pollution Contingency Plan (NCP) promulgates core aspects of the US operational pollution response system. The NCP portends the spiller is initially responsible to react to any spills caused by the company, or Responsible Party (RP). The CG, as the Federal on Scene Coordinator (FOSC), responds if the RP is unable or unwilling. Within the coastal zone spills often require extensive interagency coordination to resolve. The CG does so from all of its forty-seven Marine Safety Offices and detachments containing personnel focused on the prevention of spills, preparedness to respond, and response if necessary.

An important aspect of CG environmental response capabilities is the National Strike Force (NSF). Created in 1973 as a CG special force capability the NSF is now composed of four units: the National Strike Force Coordination Center (NSFCC), and Gulf, Pacific, and Atlantic Strike Teams. The NSF comprises the bulk of the CG's "operational response" capacity for oil and hazardous material spills.¹⁰ The NSF's most valuable resource is are the 135 assigned personnel. Their flexibility, training, and initiative is instrumental in the resolution of numerous difficult spills and incidents every year. They also extend their value by conducting interagency preparedness activities such as exercising plans.

For the NSF the normalcy associated with interagency operations – the three Strike Teams regularly work for the EPA – cultivates a distinctive relationship with the nation's civilian spill response companies and contractors. This link would likely be required for successful completion of longer MERO missions. NSF MERO capabilities utilize numerous ready loads deployable within four to six hours of notification depending upon the number of people required.¹¹ Appendix A is a list of their deployable equipment. The CG also has prepositioned skimmers, boom, and recovered oil storage as well as a fleet of buoy tenders

capable of employing skimming equipment as well. Appendix B shows all CG pollution response equipment locations that comprise the core of the nation's MERO capacity.

Environmental disasters require skilled information management personnel to coordinate messages among key stakeholders while responding to the media. Factual information is also critical for those affected by the spill. The CG Public Information Assist Team (PIAT) is a special team created by the NCP and provides expertise in this area. PIAT personnel are highly trained at communicating and assisting in low trust high concern situations and quickly creating effective staffs within a common information center at an incident. They easily interface with experts and civil affairs personnel for a wide range of information operations. With regard to MERO, CINC's may be required to communicate public information to foreign audiences as a result of environmental threats or damage. Presidential Decision Directive 68 on International Public Information requires coordinated management of information broadcast internationally, for MERO PIAT could help do so.

The CG plays an important role internationally in many environmentally related issues as well. The CG leads the US contingent to the International Maritime Organization (IMO).^{*} CG leadership helped forge an international agreement on oil spill response and cooperation due to US experiences from the Exxon Valdez oil spill. The convention entitled the "Oil Pollution, Preparedness, Response and Cooperation 1990" (OPRC) was created during the largest diplomatic conference in IMO history. The "ink was barely dry on [the international convention] when the system it envisioned was put to the test in the Arabian Gulf."¹²

^{*} The IMO is the world's premier maritime safety organization and an agency of the UN that oversees international shipping and safety issues. The Coast Guard traditionally plays a large role in leading the U.S. delegation within the IMO. For more information visit: <http://www.imo.org/imo/introd.htm>

Gulf War – Origins of “MERO”

The origins of MERO can be traced to the massive oil spill that Saddam Hussein's troops caused on or about January 19, 1991. Oil spill response forces had never mobilized within a war zone prior to the Iraqi caused spill of between seven and nine million barrels.¹³ In February 1991 retreating Iraqi army elements ignited or damaged over 700 oil wells. The Senate report on “The Environmental aftermath of the Gulf War” stated destruction efforts were “a well planned and executed ignition of Kuwait oil wells when the ground war began.” Some estimated the spill to be 20 times larger than Exxon Valdez and noted it may have discharged oil into the environment until at least late May of that year.¹⁴

This calculated environmental disaster was so large and complex that very experienced personnel from throughout the world extrapolated many aspects of the response.¹⁵ Estimates for the main oil slick ranged from 1.5 to 3 million barrels. When the Saudi Arabian government asked the US for aid in dealing with the spill the President tasked the National Response Team (NRT) to build an advisory team. The advisory team, led by Coast Guard personnel, was dispatched on 24 January and included personnel from the member agencies of the NRT. CG initial efforts ensured the rapid arrival of pollution response experts.¹⁶ Initial efforts were closely coordinated with personnel from other federal agencies such as the National Oceanographic and Atmospheric Administration (NOAA), the Environmental Protection Agency (EPA) and the IMO.

Upon arrival the US team assessed the magnitude of the impact, advised and supported the spill response leader, the Saudi Arabian Meteorology and Environmental Protection Administration (MEPA), recommended response strategies, and conducted training with local responders. Eventually the response transitioned to an international phase that the IMO oversaw to assist MEPA. As MEPA began the response, resources from both

international governmental and private organizations began to arrive. Boom arrived from Japan; Norway sent offshore boom, skimmers, and equipment operators while the Dutch sent several planeloads of shoreline cleanup equipment.¹⁷ The CG's leadership in theater was crucial in recommending a response organization structure and aiding its implementation; prioritizing spill sites and sensitive areas; using airborne oil surveillance technology; and through conducting and tracking of shoreline surveys.

This case is instructive as to what MERO may require during a massive spill within a CINC's aor. In the Gulf war, the CG played a key role. The advisory team leader, CG Captain Don Jensen noted that "... we made a positive contribution in helping the Saudis make effective use of their limited, monetary, personnel, and equipment resources to mount a response effort consistent with their culture and national priorities."¹⁸ The final report to Congress on the Gulf War echoed these sentiments, "... The cooperative efforts of the Coalition members, the U.S. Coast Guard, and the US National Oceanic and Atmospheric Administration resulted in the oil slick's having a negligible effect on the operations of Coalition naval forces."¹⁹

MERO and Military Operations Other Than War

"The traditional synergistic relationship between diplomacy and war has deepened to the point where these two instruments are deeply intertwined in daily activities."

-- General George Marshall²⁰

General Marshall's observation about the effects of diplomacy on daily operations has proven especially true during the 1990's. With the President stressing "shaping and engagement" strategies in his NSS the pace of operations quickened by the end of the decade. The quickened pace affected many CG operations. For example, CG Maritime Training

Teams (MTTs) conducted 75 missions to 45 countries in the 1999 calendar year alone.²¹

While the origins of MERO are found in the Gulf War this capability has utility across the range of military operations. (appendix C) It's this utility, and flexibility, that makes core CG MERO expertise valuable to the CINC.

Assisting Nations

On the night of February 11, 1999 the President of Honduras requested the immediate assistance from the US to resolve an emergency situation at the El Cajon Power Station.²²

The generating station had experienced a fire in the electrical generating room, cutting off 60% of the country's power supply – the country remained 35% short after putting additional generating sources on line and obtaining power from outside the country.²³

USAF firefighters attached to Joint Task Force Bravo “found the expanding fire posed significant risk and it was beyond their fire fighting capabilities.”²⁴ The USAID contacted the CG for Strike Team assistance with site safety; gas freeing operations, and monitoring for liquid and airborne contaminants upon the extinguishing of the fire.²⁵ This capability is based upon the NSF's core air deployable HAZMAT response equipment. After arrival via a USCG C-130 GST personnel met with CJTF Bravo personnel, proceeded to the site and extinguished the remaining fire using integrated Honduran and US capabilities and expertise to manage the incident. The six GST personnel were in country six days deploying with a 4-wheel drive vehicle and chemical response trailer.

The impact of CG support to the CJTF commander, Honduran Host Nation (HN) and US diplomatic officials was significant. The GST report indicates that on 14 February the Honduran President, Carlos Flores visited the site. Honduran Press coverage of the response was noted as extremely positive.²⁶ The after action report noted that CG personnel and

resources were preferable, for this case, because funding issues were easily resolved, CG assets were able to arrive quickly, and CG personnel were flexible, melding effectively with USAF, ACOE, and local military and government forces. (e.g. an interagency response)

Disaster Response

The GST responded again to South America after heavy rains pounded Venezuela on December 16-17 1999, and a wave of mud, rock, and debris descended from the nearby mountains destroying part of the port facilities in La Guaira. The request for assistance came to the NSF from Venezuela via the Centers for Disease Control and the Office of Foreign Disaster Assistance. Although this was a response under the Department of State's responsibility, the case is informative in that NSF expertise again contributed to US' National Security Strategy goals abroad.

The GST sent two personnel to contribute to an interagency hazardous materials assessment team. The situation was very complex in that the storage site was a mix of containers, warehouses, and dock areas. (appendix D) Hundreds of containers were strewn about the facility where HAZMAT containers mixed with general cargo throughout 2.1 square mile port area. Customs storage warehouses, among the most serious damaged, contained hazardous chemicals confiscated from recent drug arrests and customs violations.²⁷ Much of the material was undocumented and therefore hard to identify.²⁸ The assist team's report provided comprehensive recommendations to the Venezuelan government identifying the magnitude and severity of the HAZMAT situation. The report evaluated potential public health and occupational health implications while providing a sample plan of action for chemical assessment, potential contractors, and cleanup of the affected port environment.²⁹

The 1995 DOT – DOD MOU

The Commandant of the CG, Admiral Loy, recently highlighted the CG's value to the CINC's when he stated "Often we [the CG] can gain access to nations and ports where more overt U.S. military presence would not be welcome."³⁰ During that talk, the Commandant discussed CG contributions to joint operations specifically mentioning links with the DOD. He noted the memorandum of understanding between the Departments of Defense and Transportation that offers CG capabilities and resources in support of the National Military Strategy (NMS). The MOU's purpose is (1) to identify national defense capabilities of the Coast Guard and (2) to improve Coast Guard responsiveness as a force provider.³¹ Specifically appendix B of the MOU states "The Navy and the Coast Guard agree it is appropriate and desirable for the Coast Guard to participate in MERO."³² (appendix E) CG MERO support of the NMS is limited to the environmental effects of war, or MOOTW, that:

- (1) Restricts the freedom of the US and her allies to maneuver,
- (2) Endangers the lives of US and allied troops,
- (3) Endangers a US built or led coalition,
- (4) Inhibits significantly, the achievement of US NSS goals,
- (5) Prevents smooth transition from the post hostilities phase.³³

NWP 4-11 describes planning guidance for environmental operations for both war and MOOTW. This information, along with Army and Marine Corp environmental response guidance and CG service guidance and doctrine should be synchronized into a joint pub to guide MERO plans and exercises.

Plans

As previously mentioned contingency planning for MERO support should include the range of military operations. (appendix C) While Theater Engagement planning guidance doesn't specifically call for environmental planning perhaps it should. Army pub FM 3-100.4 provides current planning guidance regarding the appropriate location for

environmental protection information for operations orders and operations plans. Joint MERO planning doctrine would improve proper consideration of CG support for CINC needs. The DOD-DOT MOU is an excellent vehicle to accomplish this task as identified in the Universal Joint Task List (UJTL). The UJTL identifies functional tasks, conditions, measures, and criteria useful for executing the NMS. CINCs tasked or planning to "develop and execute actions to control pollution and hazardous materials" under force protection should use CG environmental protection expertise via the MOU to aid in the completion of this requirement as appropriate.³⁴

The Unified Command Plan (UCP) tasks CINC's to plan for and execute military operations as directed by the National Command Authority (NCA).³⁵ The focus of the NMS is now managed through the Theater Engagement Planning (TEP) process.³⁶ Planning for MERO could be accomplished jointly with the CINC's and CG Area commands (both LANT and PAC). CG Areas could (1) act as a focal point for CG MERO support to the CINC's, (2) periodically meet CINC and JTF staffs to aid planning, (3) Identify opportunities for participation in exercises and training with DOD units. Regular CG oil spill exercise planning required domestically by the NCP, could be "exported" to a CINC as a way to test plans as well.

The TEP and Joint planning processes match resources to military engagement activities across the spectrum of regional and transnational dangers, asymmetric challenges and "wild cards" in support of the NMS.³⁷ The DOD-DOT MOU is a vehicle by which CINC's can start to address their growing concerns for environmental issues across that spectrum. Also, by utilizing CG Area staffs the CG ensures each CINC's range of plans described in Joint Pub 5-0, "Joint Operational Planning," includes CG MERO capabilities.

Coordination

Most DOD personnel are familiar with the Federal Response Plan but few are aware of the National Contingency Plan. The National Contingency Plan (NCP) provides domestic guidance for response to oil spills and hazardous materials incidents. Per the NCP, responses to these types of incidents must be coordinated amongst all agencies, states, and personnel affected during actual responses. An NCP response organization typically includes the spiller, the state or states in which the spill occurred, and the CG or EPA for Federal jurisdiction.³⁸ Additionally, the NCP invites industry groups, academic organizations, and others to commit resources for response operations.³⁹ By policy, the CG has made the NCP a complementary plan to the FRP for emergency support function 10 (Hazardous Materials response). With regards to Joint doctrine, Joint Pub 3-08 defines interagency coordination as “the coordination that occurs between elements of the DOD and engaged US government agencies, non governmental organizations, private voluntary organizations, and regional and international organizations for the purpose of accomplishing an objective.”⁴⁰ CG interagency coordination expertise is based on years of responding with local, state, and other federal agencies. Therefore, CINC's faced with a significant MERO requirement, could access CG interagency coordination expertise via the MOU.

Exercises

The UJTL is designed for operations and exercises. The DOT- DOD MOU encourages exercises, to aid jointness, cement relationships, and clarify planning considerations. Taking advantage of this would enable the CINC's to test plans (theater engagement, functional, and mobilization plans) and gain the benefit of lessons learned.

A great example for an exercise that aided relationships is SMART EX 99. SMART EX 99 was a CG planned and led training exercise held in northeast North Carolina. Its primary function was to increase the familiarity of a newly completed interagency response-planning document called the Special Monitoring of Applied Response Technologies (SMART) protocol. The document was the result of NRT agencies hashing out the complexities of conducting monitoring, in an operational way, when oil spill dispersants are used or in-situ burning is conducted. Use of the SMART protocol requires interagency support to achieve operational effectiveness. Each agency provides resources and expertise to conduct monitoring in the field.⁴¹ Participating agencies included NOAA, EPA, and various state and local partners. CINC's would benefit from a similarly focused exercise to increase effectiveness of their interagency interaction for MERO.

Planning considerations for the CG are extremely complex for MERO. Joint Pub 3-07, "Joint Doctrine for Military Operations other Than War," provides excellent guidance on what to consider when preparing for the range of military options. For example, intelligence and information gathering is critical. The CG, and the NSF specifically, should receive "multi-disciplined all-source, fused intelligence" on emerging environmental threats as recommended in Joint Pub 3-07. Also, providing the NSF classified computer network access would allow quick compilation of necessary county data when preparing to respond for CINC's. Further, the CG's Intelligence Coordination Center could provide "pre-deployment packages" of information. These considerations for MERO support deserve close examination. They hold great promise in aiding MERO preparedness.

Challenges - MERO as another unfunded mandate

The CG has publicly stated it cannot provide the same mission, more efficiently, with decreasing budgets. Challenges exist in the very mechanism that can easily deliver CG

services to CINC's. While the 1995 DOT- DOD MOU provides the authority for planning, training, and operations identified in its annexes, it does not impose programming or budgeting obligations on either department.⁴² This presumably prevents siphoning off resources from other important missions. Also, the MOU is under-utilized, especially with regard to MERO. This paper contends that the CG's MERO capability is a tool that the CINC's need now and in the future, and that a base level of organizational preparedness needs to exist to meet that demand. But with decreasing budgets and redundant civilian and DOD capabilities does the CG really want to spend precious resources refining MERO support, an admittedly high risk low probability mission? Moreover, the forces the CG relies on to conduct MERO are fully employed domestically with resources often stretched to the limit. This is especially true for preparedness activities. The CG's personnel and operational tempo is currently demanding, so any additional MERO requirements may require other missions and staff work to remain undone. These facts pose a considerable challenge to MERO, a mission not formally utilized since the Gulf war.

Summary

The Interagency Task Force on the Roles and Missions of the CG recently noted in its final report the importance of the MERO mission, stating, "the CG's hazardous material and oil spill response capabilities should be integrated into national contingency planning for homeland defense against asymmetric threats and overseas employment in maritime environmental response operations. Both of these missions are appropriate force-sizing considerations."⁴³ They found MERO support to be an important capability for CINC support. Put another way by Admiral Loy, as a model maritime service the CG's "peacetime missions offer CINC's and ambassadors extensive contacts and inroads to national bureaucracies to help shape the strategic environment."⁴⁴ Its noteworthy that prevention

efforts have been successful since the passage of OPA 90 in reducing spills in the U.S. Worldwide trends have followed. For instance, the International Tanker Owners Pollution Federation currently notes "major" spills have decreased from twenty in 1973 past a high of thirty-four in 1979 to five in 1999.⁴⁵ But comparing this success to a projected doubling or tripling in oil transshipments, by the year 2020 shows that the risk is still great.⁴⁶ The recent grounding of the tanker Jessica in the Galapagos Islands is a clear reminder that significant threats still exist.⁴⁷ Put these risks into a MOOTW or wartime scenario and the need for MERO support capability becomes clear.

The DOD has developed intrinsic tools, such as the Army's recently published FM 3-100.4/MCRP 4-11B "Environmental Considerations in Military Operations" and utilized units such as the Army Corps of Engineers for the resolution of environmental issues.⁴⁸ But, the CINC's will continue to need the support of the CG in the area of maritime MERO as the US continues to pursue a strategy of "shaping" and "engagement" in MOOTW and as a preparedness measure for war. The CG is the right tool. The CG's regulatory and enforcement authorities provide a underlying capability the CINCs can use for their environmental response needs, as the MOU and service needs allow. EPA director Richard Reilly's executive summary to the US Gulf Environmental Assessment report on the Gulf War stated, "But lesser chemical accidents and oil spills have a dreary, almost routine familiarity, making U.S. experience a valued resource, not just here but throughout the world. Making that experience available, as we have in the Gulf, is one of the most welcome and benign expressions of U.S. foreign policy."⁴⁹ By including CG tools, like MERO, into Joint plans CINC's conduct sound preparation for low probability, high consequence events while adhering to the principles of war and MOOTW.

Recommendations

Environmental considerations should be incorporated into Joint Pubs and policy where appropriate. The following brief list targets areas that may assist planners and CINCs with preparing for MERO:

1. Create a Joint Pub for Military Environmental Response Operations (MERO).
2. CG Area staffs should assist with planning for MERO support to the CINC.
3. Exercise MERO and Interagency Coordination activities via the DOT-MOU.
4. Joint Pub 3-07 should include environmental response in its list of MOOTW operations.
5. Joint Pub 3-08 should discuss the NRS, NCP, and the NRT for domestic response issues.
6. Include CG MERO in theater engagement plans
7. The Joint Task Force Commander's Handbook for Peace operations does not include environmental considerations in its integrated strategy as shown in **Figure IV—5**. A recommended change to the model is provided as **Figure IV—5x** below.

Figure IV-5x



**Recommended change to Figure IV-5 in JTF Cdr's
Handbook for Peace Ops**

NOTES

¹ Daniel H. Deudney and Richard A. Matthew, eds., Contested Grounds – Security and Conflict in the New Environmental Politics (Albany, NY: SUNY Press, 1999), 4. See also, Canty, Rachel, LT, USCG. “The Coast Guard and Environmental Protection: Recent Changes and Potential Impacts.” *Naval War College Review* 52 (Autumn 1999) 77-89. Lt Canty’s article illustrates how an environmental consideration “the protection of right whales” overrode traditional freedom of navigation concerns.

² *Ibid.*, 189 – 190.

³ *Ibid.*, 2.

⁴ Chairman of the Joint Chiefs of Staff. *National Military Strategy of the United States of America* “Shape, Respond, Prepare Now: A Military Strategy for a New Era.” (Washington, DC: 1997) 8-9.

⁵ Thomas A. Holden Jr. “Considerations for a Department of Defense Environmental Security Policy in Military Operations Other than War.” Unpublished Research Paper, (U.S. Army War College: Carlisle Barracks, PA, 1998), 24.

⁶ Center for Naval Analyses. Regional Issues Team, U.S. Coast Guard Support for the CINCs: Current and Future Relationships Overseas. CAB 99-100. Alexandria, VA 1999, page 106.

⁷ Brian X. Bush, “Promoting Environmental Security During Contingency Operations.” Unpublished Research Paper, (U.S. Army War College: Carlisle Barracks, PA, 1997), 21-22; Thomas A. Holden Jr. “Considerations for a Department of Defense Environmental Security Policy in Military Operations Other than War.” Unpublished Research Paper, (U.S. Army War College: Carlisle Barracks, PA, 1998), 24. Both papers make similar recommendations regarding difficulty integrating environmental concerns into planning efforts and the need for easier access to, and better, interagency planning. Interagency interaction is mentioned in all DOD literature as requirement for properly addressing environmental concerns.

⁸ Center for Naval Analyses. Policy, Strategy, and Forces division, Maritime Economic Interests & the Sea Lines of Communication Through the South China Seas. CAB 96-0005 Alexandria, VA 1996, page 4.

⁹ William Holt, “Statement,” U.S. Congress. House, Committee on Merchant Marine and Fisheries, *The Environmental Role of the National Oceanic and Atmospheric Administration and the U.S. Coast Guard in the Persian Gulf Conflict: Hearing before the Subcommittee on Oceanography, Great Lakes and the Outer Continental Shelf, the Subcommittee on Fisheries and Wildlife Conservation and the Environment, and the Subcommittee on Coast Guard and Navigation*, 103rd Cong, 4th sess., 17 September 1991. 14.

¹⁰ U.S. Coast Guard, U.S. Coast Guard National Strike Force (NSF) Resources Manual (National Strike Force Coordination Center, NC: 2000), 1.1.

¹¹ *Ibid.*, 2.2.

¹² Mark McEwen, “New international convention battles environmental catastrophe,” Proceedings of the Marine Safety Council, (January-February 1992): 47.

¹³ Doug Lentsch and James Obernessor, “World’s largest oil spill ... OPERATION CLEANUP,” Proceedings of the Marine Safety Council, (January-February 1992): 43.

¹⁴ Senate, Committee on Environment and Public Works, The Environmental Aftermath of the Gulf War, Gulf Pollution Task Force Report, 102nd Cong., 2nd sess. (Washington, DC: GPO, 1992), 1.

¹⁵ Environmental Protection Agency, Report to Congress on United States Gulf Environmental Technical Assistance, (Washington, DC: 1991), iv. Congress,

¹⁶ Doug Lentsch and James Obernessor, "World's largest oil spill ... OPERATION CLEANUP," Proceedings of the Marine Safety Council, (January-February 1992): 42. Reports conflict on the process by which the Saudi request was processed. The NRT coordinated the initial response, which later turned into an international effort, coordinated by the International Maritime Organization.

¹⁷ Environmental Protection Agency, Report to Congress on United States Gulf Environmental Technical Assistance, (Washington, DC: 1991), 8-9. Much of the preceding paragraph came from this report.

¹⁸ Donald Jensen, "Statement," U.S. Congress. House, Committee on Merchant Marine and Fisheries, The Environmental Role of the Natinal Oceanic and Atmospheric Administration and the U.S. Coast Guard in the Persian Gulf Conflict: Hearing before the Subcommittee on Oceanography, Great Lakes and the Outer Continental Shelf, the Subcommittee on Fisheries and Wildlife Conservation and the Environment, and the Subcommittee on Coast Guard and Navigation, 103rd Cong, 4th sess., 17 September 1991.

¹⁹ The report states "It is not clear why Iraq released oil into the Persian Gulf. Conceivably, Iraq had hoped to interfere with Coalition naval operations in the Gulf, perhaps to impede expected amphibious operations. By threatening desalinization plants, Iraq also may have hoped to disrupt Coalition military operations and Saudi civilian life dependent on a steady flow of fresh water. As it turned out, the cooperative efforts of the Coalition members, the US Coast Guard, and the US National Oceanic and Atmospheric Administration resulted in the oil slick's having a negligible effect on the operations of Coalition naval forces." Department of Defense, Final Report to Congress Conduct of the Persian Gulf War, 102nd Cong., 3rd sess. (Washington, DC: GPO, 1992), 625.

²⁰ General George Marshall, quoted in Thomas A. Holden, Jr., "Considerations for a Department of Defense Environmental Security Policy in Military Operations other than War," (Unpublished Research Paper, U.S. Army War College, Carlisle Barracks, PA), 19.

²¹ Center for Naval Analyses. Regional Issues Team, U.S. Coast Guard Support for the CINCs: Current and Future Relationships Overseas. CAB 99-100. Alexandria, VA 1999, page 29.

²² Commander, National Strike Force letter w/encl from the Gulf Strike Team to Commandant (G-MOR), 24 August 1999, "Incident Summary Report for National Strike Force Response at El Cajon Dam, Honduras" Elizabeth City, NC, encl page 1.

²³ Ibid.

²⁴ Ibid., 3.

²⁵ Ibid., 1.

²⁶ Ibid.

²⁷ U.S. Office of Foreign Disaster Assistance, US Agency for International Development. "Situation Assessment Report involving the Hazardous Material Disaster Site at Laguaira Port, Federal District, Venezuela, as performed by the US Hazardous Materials Assessment Team," 10 January, 2000, Para. 2.

²⁸ USCG NSF Gulf Strike Team, Venezuela Floods Port of Laguaira, Incident Summary Report Case # 010-00, 2000.

²⁹ U.S. Office of Foreign Disaster Assistance, US Agency for International Development. "Situation Assessment Report involving the Hazardous Material Disaster Site at Laguaira Port, Federal District, Venezuela, as performed by the US Hazardous Materials Assessment Team," 10 January, 2000, 1.

³⁰ Admiral James M. Loy, "An Address to the Naval War College," Speech, U.S. Naval War College, Newport, RI: 11 January 2001.

³¹ U. S. Department of Defense and Transportation, Memorandum of Agreement between the Department of Defense and the Department of Transportation on the use of U.S. Coast Guard Capabilities and Resources in Support of the National Military Strategy. Washington, DC: 1995. Appendix B.

³² Ibid.,

³³ Department of the Navy, Naval Warfare Publication Environmental Protection. Office of the Chief of Naval Operations, 1999. 1-5.

³⁴ Department of Defense, Universal Joint Task List, CJCSM 3500.04B (Washington, DC: 1999), 2-425. UJTL task # OP 6.2.10 states that CINCs, when or if needed, will "Develop and execute actions to control Pollution and Hazardous Materials."

³⁵ Ralph R. Steinke and Brian L. Tarbet, "Theater Engagement Plans: A Strategic Tool or a Waste of time?" Parameters. (Spring 2000): 1.

³⁶ Ibid., 5.

³⁷ The White House. A National Security Strategy for a New Century. Washington, DC: 1999, 1.

³⁸ U.S. Department of Transportation, National Oil and Hazardous Substances Pollution Contingency (NCP) (40 CFR Part 300) (Washington, D.C.: Government Printing Office, 1995). See Section 3, Figure 3 National Response System Concepts: Response.

³⁹ Ibid, See para. 6.1 "Nongovernmental Participation."

⁴⁰ Joint Chiefs of Staff, Interagency Coordination During Joint Operations, Joint Pub 3-08 Volume I (Washington, DC: 09 October 1996), GL-7.

⁴¹ US Coast Guard, EPA, NOAA, and CDC, versions 1/2000, "Special Monitoring of Applied Response Techniques," <http://response.restoration.noaa.gov/oilands/SMART/SMART.pdf>, [01/26/01].

⁴² U. S. Department of Defense and Transportation, Memorandum of Agreement between the Department of Defense and the Department of Transportation on the use of U.S. Coast Guard Capabilities and Resources in Support of the National Military Strategy. Washington, DC: 1995. 1.

⁴³ Mortimer Downey, Interagency Task Force on the Roles and Missions of the United States Coast Guard (Washington, DC:2000), conclusions p. 24.

⁴⁴ Admiral James M. Loy, "An Address to the Naval War College," Speech, U.S. Naval War College, Newport, RI: 11 January 2001.

⁴⁵ Collen Valles, "Thirty years later, tankers safer but spills still a threat," Associated Press Wire Story, 19 January, 2001, San Francisco.

⁴⁶ Center for Security Strategies and Operations, Bruce Stubbs and Scott Truver, Ph. D., America's Coast Guard Safeguarding U.S. Maritime Safety and Security in the 21st Century (Arlington, VA:), 31;

Mortimer Downey, Interagency Task Force on the Roles and Missions of the United States Coast Guard (Washington, DC:2000), conclusions p. 24.

⁴⁷ Gonzalo Soland, "Oil Spill Threatens in Galapagos," Associated Press Wire Story, 23 January 2001, Puerto Baquerizo.

⁴⁸ Department of the Army, Environmental Considerations in Military Operations. FM 3-100.4 (Washington, DC: 15 June 2000), i. The manual guides the US Army and Marine Corps in applying appropriate environmental protection procedures during all types of operations.

⁴⁹ Environmental Protection Agency, Report to Congress on United States Gulf Environmental Technical Assistance, (Washington, DC: 1991), i.

BIBLIOGRAPHY

- Bush, Brian X. "Promoting Environmental Security During Contingency Operations." Unpublished Research Paper, U.S. Army War College, Carlisle Barracks, PA: 1997
- Canty, Rachel, LT, USCG. "The Coast Guard and Environmental Protection: Recent Changes and Potential Impacts." *Naval War College Review* 52 (Autumn 1999) 77-89.
- Center for Naval Analyses. Regional Issues Team. Maritime Economic Interests & the Sea Lines of Communication Through the South China Sea. CAB 96-0005. Alexandria, VA 1996.
- Center for Naval Analyses. Regional Issues Team. U.S. Coast Guard Support for the CINCs: Current and Future Relationships Overseas. CAB 99-100. Alexandria, VA 1999.
- Chairman of the Joint Chiefs of Staff. National Military Strategy of the United States of America "Shape, Respond, Prepare Now: A Military Strategy for a New Era." Washington, DC: 1997.
- Clausewitz, Carl Von. On War, New York: Alfred A. Knopf, 1993.
- Commander, National Strike Force letter w/encl from the Gulf Strike Team to Commandant (G-MOR). "Incident Summary Report for National Strike Force Response at El Cajon Dam, Honduras." Elizabeth City, NC. 24 August 1999.
- Department of the Army. Environmental Considerations in Military Operations. FM 3-100.4. Washington, DC: 15 June 2000.
- Deudney, Daniel H., and Richard A. Matthew, eds., Contested Grounds – Security and Conflict in the New Environmental Politics (Albany, NY: SUNY Press, 1999).
- Downey, Mortimer. Department of Transportation. Interagency Task Force on the Roles and Missions of the United States Coast Guard (Washington, DC:2000).
- Environmental Protection Agency, Report to Congress on United States Gulf Environmental Technical Assistance. (Washington, DC: 1991).
- Final Report to Congress – Conduct of the Persian Gulf War. U.S. Department of Defense, April 1992.
- Holden, Thomas A., Jr. "Considerations for a Department of Defense Environmental Security Policy in Military Operations Other than War." Unpublished Research Paper, U.S. Army War College, Carlisle Barracks, PA: 1998.
- Lentsch, Doug and James Obernessor. "World's largest oil spill ... OPERATION CLEANUP." Proceedings of the Marine Safety Council (January-February 1992).

Loy, James M. "The United States Coast Guard: A Unique Instrument of National Security." Sea Power (December 1999): 8-13.

Loy, James M. "Shaping America's Joint Maritime Forces: The Coast Guard in the 21st Century." Joint Forces Quarterly (Spring 1998): 9-16.

McEwen, Mark "New international convention battles environmental catastrophe," Proceedings of the Marine Safety Council. (January-February 1992): 47.

National Defense Panel. Transforming Defense National Security in the 21st Century. Report to the Secretary of Defense. Washington, DC: 1997.

"National Security Branch." Coast Guard Web Page on National Security.
<http://www.uscg.mil/hq/g-m/mor/Articles/NatlSecurity.htm> [30 November 2000].

Peter Tunley, "Waging War - General Schwarzkopf's Diary", MSNBC News (MSNBC) Interactive News, LLC. One Microsoft Way, Redmond, WA 98052. 28 October 2000.

Roundtable Conference Report – The Army: Geostrategic Concerns and Environmental Considerations. (Stanford, CA: Hoover Institution on War, Revolution and Peace, 1992.

Soland, Gonzalo "Oil Spill Threatens in Galapagos," Associated Press Wire Story, 23 January 2001, Puerto Baquerizo.

Steinke, Ralph R. and Brian L. Tarbet. "Theater Engagement Plans: A Strategic Tool or a Waste of time?" Parameters. (Spring 2000).

The White House. A National Security Strategy for a New Century. Washington, DC: 1999.

U.S. Army War College, Strategic Studies Institute, Special Report: Strategic Outreach Roundtable Conference Report – The Army: Geostrategic Concerns and Environmental Considerations. (Stanford, CA: Hoover Institution on War, Revolution and Peace, 1992.

USCG NSF Gulf Strike Team, Venezuela Floods Port of Laguaira. Incident Summary Report Case # 010-00. 2000.

U.S. Coast Guard, U.S. Coast Guard National Strike Force (NSF) Resources Manual, National Strike Force Coordination Center, NC: 2000.

US Coast Guard, EPA, NOAA, and CDC, versions 1/2000, "Special Monitoring of Applied Response Techniques,"
<http://response.restoration.noaa.gov/oilaid/SMART/SMART.pdf>, [01/26/01].

U. S. Congress, Senate, Committee on Environment and Public Works. The Environmental Aftermath of the Gulf War. Gulf Pollution Task Force Report. 102nd Cong., 2nd sess. Washington, DC: GPO, 1992.

- U. S. Department of Defense and Transportation, Memorandum of Agreement between the Department of Defense and the Department of Transportation on the use of U.S. Coast Guard Capabilities and Resources in Support of the National Military Strategy. Washington, DC: 1995.
- U.S. Department of Defense, Doctrine for Joint Operations Joint Pub 3-0. (Washington D.C.: GPO, 1995).
- U.S. Department of Defense. Universal Joint Task List. CJCSM 3500.04. (Washington D.C.: 1999).
- U.S. Department of Defense. Conduct of the Persian Gulf War – Final Report to Congress. Final Report to Congress. Washington, DC 1992.
- U.S. Department of Transportation, National Oil and Hazardous Substances Pollution Contingency (NCP) (40 CFR Part 300) (Washington, D.C.: GPO, 1995).
- U.S. Office of Foreign Disaster Assistance, US Agency for International Development. "Situation Assessment Report involving the Hazardous Material Disaster Site at Laguaira Port, Federal District, Venezuela, as performed by the US Hazardous Materials Assessment Team." 10 January, 2000.
- U.S. Joint Chiefs of Staff. Interagency Coordination During Joint Operations, Joint Pub 3-08 Volume I. Washington, DC: 09 October 1996).
- U.S. Navy Department, Office of the Chief of Naval Operations. Naval Warfare Publication Environmental Protection, NWP 4-11. Newport, RI: 1999.
- U.S. Congress. House. Committee on Merchant Marine and Fisheries. The Environmental Role of the Natinal Oceanic and Atmospheric Administration and the U.S. Coast Guard in the Persian Gulf Conflict: Hearing before the Subcommittee on Oceanography, Great Lakes and the Outer Continental Shelf, the Subcommittee on Fisheries and Wildlife Conservation and the Environment, and the Subcommittee on Coast Guard and Navigation, 103rd Cong, 4th sess., 17 September 1991
- U.S. General Accounting Office. COAST GUARD Key Budget Issues for Fiscal Years 1999 and 2000. Report # GAO/T-RCED-99-83 to the Subcommittee on Coast Guard and Maritime Transportation. Washington, DC: 1999.
- U.S. General Accounting Office. COAST GUARD Budget Challenges for 2001 and Beyond. Report # GAO/T-RCED-00-103 to the Subcommittee on Coast Guard and Maritime Transportation. Washington, DC: 1999.
- U.S. President. "International Public Information (IPI)." PRESIDENTIAL DECISION DIRECTIVE / NSC-68 (30 April 1999).
- Valles, Collen "Thirty years later, tankers safer but spills still a threat," Associated Press Wire Story, 19 January, 2001, San Francisco.

APPENDIX A

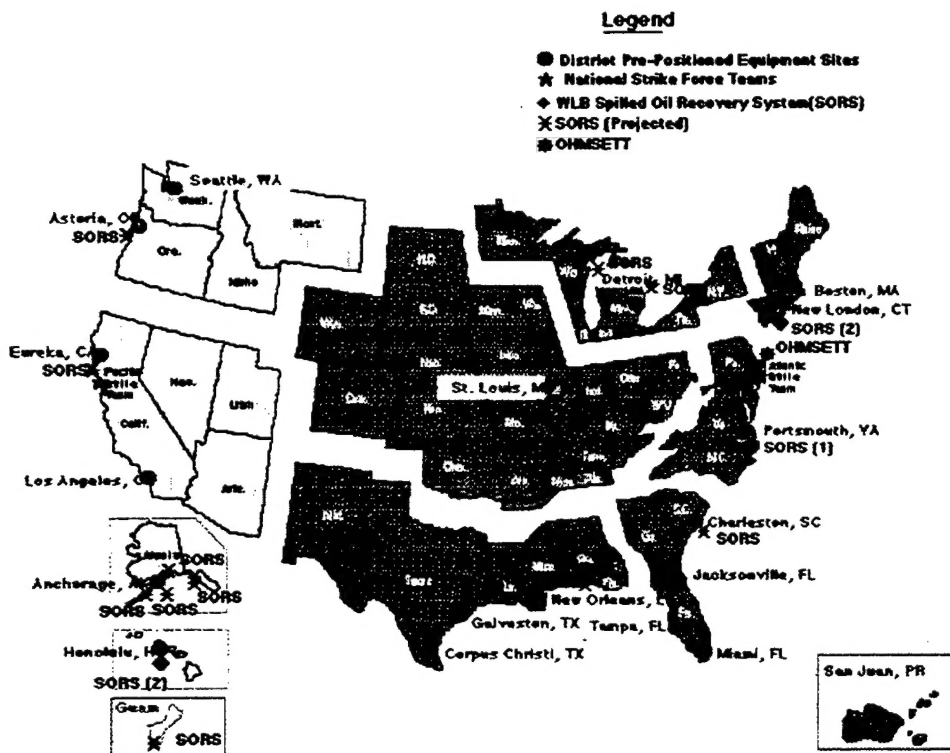
National Strike Force Equipment Listing

Equipment/Types	Ref. Page	NSFCC	AST	GST	PST
3. SPILL RESPONSE SYSTEMS	3.1				
Vessel of Opportunity Skimming System (VOSS)	3.1		1	1	1
Inflatable Boom System (2 reels -656 ft per reel)	3.2		5	5	5
Large Pump system	3.26		1	1	1
Small Pump system	3.28		1	1	1
Boom Mooring System	3.24		2	2	2
Dracone Off-Loading Pumping System (DOS)	3.3		2	2	2
4. SUPPORT EQUIPMENT	4.1				
HVPU Highstar Prime Mover/HPU Deutz Prime Mover	4.1	4	7	7	8
Skimmer	3.5, 4.2		3	3	3
Submersible Pumps	4.4		9	13	12
Non-Submersible Pumps	4.5		12	13	10
Temporary Storage Devices	4.7				
DRAONE	(No longer in NSF inventory - can be requested through Navy SUPSALV)				
Canflex Sea Slug FCB-100	4.9		2	2	2
Barge	4.11		6	6	6
Response Command Post/PICP counted as 1	4.12		2	2	2
Air Compressors (Equipment and Breathing)	4.14		4	4	4
Generators	4.17		6	10	11
Lighting Towers	4.21		3	6	6
5. BOATS	4.22				
32' Munsen	4.22		1	1	1
18-24' Utility Boat	4.22		3	2	1
17' Rigid Hull Inflatable (RHIB)	4.23		1	1	1
15-17' Inflatable (AVON)	4.24		4	10	10
Flood Response Boat	4.25		2	2	1
6. TRUCKS	4.26				
ATV's	4.26		2	5	0
Pickup Truck	4.27		3	3	1
Multi-Passenger	4.27		3	4	2
Tractor Trailer Cab	4.27		3	3	3
Truck Crane (7-10 Tons)	4.27		1	1	1
7. TESTING EQUIPMENT	4.28				
Polychlorinated Biphenyl Test Kit (PCB)/HAZCAT Kit	4.28		2	2	2
Soil and Liquid Sampling Equipment Kit	4.28		1	1	1
8. HAZARDOUS MATERIAL RESPONSE EQUIPMENT	4.29				
Emergency Leak Repair Kits	4.28		3	3	3
Vetter System	4.29		3	3	3
Hazardous Material Response Kit	4.29		3	3	3
Overpack Drums	4.29		3	3	3
9. CHEMICAL RESPONSE EQUIPMENT	4.3				
Salvage Assessment Kit	4.3		3	4	2
Decontamination Kit	4.31		2	2	2
Admin Kit	4.32		6	5	3
Chemical Response Trailer	4.33		2	2	use CONEX boxes
10. CHEMICAL RESPONSE EQUIPMENT	5.1				
Personal Protective Equipment					
Suits	5.1				
Level A	5.1 - 5.2		46	46	51
Level B & C	5.2		50	50	50
Level D	5.2	Coveralls			
Respirators	5.3				
SCBA	5.3		24	24	28
Air-Purifying Respirators	5.4		50	50	50
Environmental Monitoring Equipment	5.5				
Air Monitoring Systems	5.5				
Equipment	5.6		20	22	18
Kits	5.6		3	3	3
Weatherpak	5.7		5	2	3
Detectors	5.8		8	8	9
Meters	5.9		10	7	8
Tents	5.11		2	1	1
11. COMMUNICATIONS & COMPUTER EQUIPMENT	6.1				
Communications					
Radio (includes Comm Kit and Base Stations)	6.2 - 6.3		99	110	100
Chargers	6.2		30	30	30
Pagers	Not Shown	8	39	40	40
Phones (includes Fax Machines)	6.3	8	18	18	18
Repeaters	6.4		2	2	2
NIFC Starter System	6.4	(Not in NSF inventory - available upon request)			
Computers	6.5				
OSC2 (Suite)	6.5	1	1	1	1
PISCES	6.6	1			
PREP Exercise System	6.6	1			
Computer Kit	6.7		6	6	6

Note: Support Equipment items are not part of Spill Response Systems.

Disclaimer: This listing illustrates general equipment capabilities only. Call your servicing Strike Team for specifics

APPENDIX B



Location of US Coast Guard Pollution Response Equipment*

*This and appendix A were created by the USCG NSFCC, Elizabeth City, NC.

APPENDIX C

Range of Military Operations			
Military Operations		General US Goal	Examples
C O M B A T	War	Fight and Win	Large-scale combat Operations Attack / Defend / Blockade
	N O N C O M B A T	Deter War & Resolve conflict	Peace Enforcement / NEO Show of Force / Strikes Raids / Counter terrorism
			Peacekeeping Counterinsurgency
	Other		
	Than		Antiterrorism / NEO Disaster Relief
	War	Promote Peace	Peace building Nation Assistance Civil Support Counter Drug

MOOTW and WAR - The range of military operations

Area of Contamination

D-1

APPENDIX E

ANNEX B TO MEMORANDUM OF AGREEMENT BETWEEN THE DEPARTMENT OF DEFENSE AND DEPARTMENT OF TRANSPORTATION ON THE USE OF U. S. COAST GUARD CAPABILITIES AND RESOURCES IN SUPPORT OF THE NATIONAL MILITARY STRATEGY

MILITARY ENVIRONMENTAL RESPONSE OPERATIONS

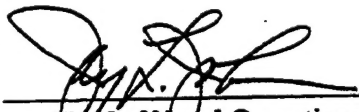
DISCUSSION


Massive marine pollution incidents, such as the Iraqi-generated crude oil spill during Operation Desert Shield/Desert Storm, have the potential to disrupt military operations of U.S. and allied forces. The Coast Guard and the Navy have shared interests and complementary capabilities in responding to incidents of marine pollution in and around the battlespace. Further, the ability to respond to significant marine pollution incidents in the post-hostilities phase of a campaign is instrumental in successful war termination and the restoration of critical infrastructures.

The Coast Guard maintains many proficiencies and capabilities relevant and applicable to environmental response. As a military service with a core mission of environmental response, the Coast Guard is well suited to contribute to Military Environmental Response Operations. The Coast Guard is the lead Federal agency charged with preventing and responding to marine pollution incidents in the U.S. and is therefore organized and equipped to command, coordinate, consult, and provide forces to contribute to the response to major spills or environmental disasters worldwide. Additionally, the Coast Guard's strong international reputation in pollution response and the Service's tradition of conducting operations in conjunction with other agencies, governments, and private industry lends itself to a coordinating role in Military Environmental Response Operations.

ACTION

The Navy and Coast Guard agree that it is appropriate and desirable for the Coast Guard to participate in Military Environmental Response Operations. To this end, both Services fully support Coast Guard participation in the planning, training, and deployment of personnel for this mission in direct support of the Theater CINCs environmental response requirements.


Chief of Naval Operations


Commandant of the Coast Guard